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**United States****Myer**[11] **3,831,156**[45] **Aug. 20, 1974**

- [54] **BIASING APPARATUS FOR MAGNETIC DOMAIN STORES**
- [75] Inventor: **Jon H. Myer**, Woodland Hills, Calif.
- [73] Assignee: **Hughes Aircraft Company**, Culver City, Calif.
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- [21] Appl. No.: **351,394**

**Related U.S. Application Data**

- [62] Division of Ser. No. 205,095, Dec. 6, 1971.

- [52] U.S. Cl. .... **340/174 TF, 340/174 YC, 340/174 PM, 350/151**
- [51] Int. Cl. .... **G11c 11/14**
- [58] Field of Search... **340/174 TF, 174 YC, 174 PM; 336/110; 350/151**

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*Primary Examiner*—Stanley M. Urynowicz, Jr.  
*Attorney, Agent, or Firm*—W. H. MacAllister; Donald C. Keaveney

[57] **ABSTRACT**

This invention relates to magnetic biasing apparatus for devices employing cylindrical magnetic domains (commonly called bubbles) in a uniaxially anisotropic magnetic medium such as a single crystal platelet for the analysis and storage of digital information. Presence or absence of changes in the state of polarization of polarized light transmitted through one or more of said transparent platelets may be detected to perform a subtractive comparison of an unknown signal comprised of unipolar bits with a reference signal or to provide readout signals from a random access, large scale nondestructive-readout memory. Many different logic configurations may additionally or alternatively be incorporated in these devices by virtue of a unique pattern of conductors used to define bit storage locations in the crystal platelet and magnetic means to confine the magnetic bubbles therein.

**3 Claims, 21 Drawing Figures**